

SUPPORT FOR THE AMENDMENTS

Claim 19 has been canceled.

Claims 1-4, 7-9, and 15-17 have been amended.

Support for the amendment of Claims 1-4, 7-9, and 15-17 is provided by the corresponding claims as originally filed, the specification throughout (for example, at pages 3-4 and 7-14), and the Examples.

No new matter has been added by these amendments.

REMARKS

Claims 1-18, 20, and 21 are pending in the present application.

The rejection of Claims 1-10 under 35 U.S.C. §112, second paragraph, is obviated by amendment.

In the Office Action, the Examiner continues to hold that the claims are indefinite alleging that it is not clear what the ratio range of “9/1 to 1/9” is based on. Applicants submit that the ratio of “9/1 to 1/9” (now “8/2 to 6/4”) clearly and facially refers to a weight ratio of the organic solvent (now limited to ethanol) and water in the mixed solution. The Examiner’s confusion seems to stem from a misunderstanding when attempting to read Claims 1-4 in context with Claims 7-9. The Examiner says as much in paragraph bridging pages 2-3 of the Office Action. Although Applicants believe that the claims are, in fact, definite, Claims 1-4 and 7-9 have been amended herein to improve clarity.

Withdrawal of this ground of rejection is requested.

The rejections of: (a) Claims 1, 3, 5, and 10 under 35 U.S.C. §102(b) over JP 6-128168, (b) Claims 1, 3, 5-9, and 15-19 under 35 U.S.C. §103(a) over JP 46-39058, (c) Claims 2 and 4-9 under 35 U.S.C. §103(a) over JP 46-39058 together with JP 6-128168, and (d) Claims 1-6, 10, and 15-19 under 35 U.S.C. §103(a) over JP 6-128168, are respectfully traversed.

JP 46-39058 discloses a purified product of catechins can be obtained by taking the following steps: adding activated carbon to a catechin-containing solution obtained by extraction of tea leaves with water, acetone, ethanol and ethyl acetate, or to an alcoholic

extract liquor of tea leaves, and then removing therefrom the resulting impurities (e.g. chlorophyll), followed by distillation of the solvent under a carbon dioxide gas atmosphere.

JP 06-128168 discloses that a powdered or concentrated product of tea catechins can be obtained by taking the following steps: preparing a tea extract by infiltration of dried tea leaves (100 parts by weight) into a solvent (300-600 parts by weight), or by heating tea leaves for 2 min to 12 hours, and then removing unnecessary by-products from the tea extract with activated charcoal, acid clay or diatomaceous earth before, and after, conducting a concentration of the alcoholic solution, followed by decolorization of the concentrated product.

The objective of JP 46-39058 is to produce an active agent in an extract liquor, apparently for addition to sea food. However, the Examiner alleges that the processing is the same (i.e., the starting material and the processing steps), as such, the desired objective (i.e., removal of caffeine and production of a green tea extract with caffeine removed) would be inherently met. In other words, selective removal of caffeine is inherent to the contacting step and would be met by the art so long as the material contacted with the activated carbon (with or without acid clay or activated clay) contained caffeine.

First, at no point does JP 46-39058 disclose or suggest dissolving a caffeine-containing catechin composition in a mixed solution of ethanol and water in a ratio ranging from 8/2 to 6/4 by weight as claimed. The Examiner alleges that this limitation is met by treating 100 g of tea with 300 g of solution. However, this is clearly the incorrect ratio as the ratio in the claims is the ratio of the organic solvent to water. JP 46-39058 does not actually disclose any ratio of organic solvent to water.

Again, as was the case above, the Examiner's position related to JP 6-128168 is that the processing in JP 6-128168 is the same (i.e., the starting material and the processing steps),

as such, the desired objective (i.e., removal of caffeine and production of a green tea extract with caffeine removed) would be inherently met. In other words, selective removal of caffeine is allegedly inherent to the contacting step and would be met by the art so long as the material contacted with the activated carbon (with or without acid clay or activated clay) contained caffeine.

Applicants disagree with this position by the Examiner and submit that at no point does JP 6-128168 disclose or suggest dissolving a caffeine-containing catechin composition in a mixed solution of an organic solvent and water in a ratio ranging from 9/1 to 1/9 by weight as claimed. Nonetheless, the Examiner alleges that this limitation would flow from routine optimization (citing Hara (US 4,613,672)).

As was the case above for JP 46-39058, even if the Examiner were to take the position that the ratio of organic solvent to water is broad and obvious, the Examiner has not made out a proper case. A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) The Examiner has not offered any recognition in either JP 46-39058 or JP 6-128168 that the ratio of organic solvent to water is a result-effective variable. Thus, a *prima facie* case of obviousness has not been made.

Even if the ratio of organic solvent to water is a result-effective variable, the evidence provided in the Fukuda Declaration filed on February 2, 2009, clearly illustrate the criticality of the claimed range. Specifically, Applicants submit that even an allegation of obviousness would be rebutted by the experimental evidence illustrating the benefits of the claimed invention that are not disclose, suggested, or even predictable based on the disclosures of JP

46-39058 and JP 6-128168, which are presented in the Declaration under 37 C.F.R. §1.132 filed on February 2, 2009. In the Declaration filed on February 2, 2009, Applicants demonstrated the advantages of the claimed process which comprises treating a caffeine-containing catechin composition by use of a mixed solution containing an organic solvent and water at the specifically claimed ratio. In the Declaration filed on February 2, 2009, Applicants performed additional experiments using a mixed solution of ethanol and water wherein the weight ratio of ethanol to water is more than 9/1. As shown in the Tables in paragraph 7 and summarized in paragraph 8 of the Declaration, mixed solution of an organic and water wherein the weight ratio of organic solvent to water is more than 9/1 have deteriorating color tone and also suffer from persistent bitterness.

With respect to Claims 7-9, Applicants submit that there is no basis for including these claims in the anticipation rejection over JP 46-39058 and/or the obviousness rejection over JP 46-39058 and JP 6-128168 as the Abstract offers nothing in regard to the specific method of producing the caffeine-containing catechin composition for use in the claimed method. Further, the Examiner makes no attempt to provide any support for rejecting these claims. It appears that Claims 7-9 were included in this rejection because of the Examiner's misunderstanding of the clear language of the previously pending claims as well as the relationship between Claims 1-4 and Claims 7-9. Accordingly, Applicants submit that these claims should not be properly rejected.

Moreover, JP 6-128168 and JP 46-39058 disclose a method which entails contacting an alcoholic extract liquor of tea leaves with activated carbon (and acid clay or activated clay). It is questionable whether these methods are sufficient to improve the color tone (or hew) of a beverage, and also whether these methods are capable of efficiently removing caffeine from such compositions. To address these questions, Applicants conducted

additional new experiments, which are presented in the Declaration under 37 C.F.R. §1.132 **submitted herewith.**

On the basis of the new data appearing in the Declaration under 37 C.F.R. §1.132 submitted herewith, the Declarant states:

As evidenced by Comparative Example 5' in the table appearing in paragraph 7 above, the purified product of alcoholic extract of tea leaves shows its absorbance to be 0.312, which is indicating the evidence that the hue of the product is extremely deteriorated, compared with the ones provided by Examples 2 and 3. Furthermore, the weight ratio of non-polymer catechins/caffeine after treatment is 4.55, from which it can also be said that the removal of caffeine is almost impossible where a tea extract is produced according to Comparative Example 5'.

Thus, it is concluded that the process of the present invention is significantly superior to the one described in JP 6-128168, by virtue of its specifically claimed multiple steps, which comprises dissolving a caffeine-containing catechin composition a 9/1 to 1/9 by weight mixed solution of an organic solvent and water, and then bringing the resultant solution into contact with activated carbon and allowing said activated carbon to absorb caffeine to remove caffeine.\

In addition to the fact that JP 6-128168 and JP 46-39058 do not anticipate the claimed invention, Applicants remind the Examiner that "Evidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut *prima facie* obviousness. "Evidence that a compound is unexpectedly superior in one of a spectrum of common properties . . . can be enough to rebut a *prima facie* case of obviousness." No set number of examples of superiority is required. *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987)" Thus, the experimental data discussed above appearing in the Declaration filed on February 2, 2009, and the Declaration submitted herewith, clearly illustrates that substantial benefits flowing from the claimed method, which are enough to rebut a *prima facie* case of obviousness.

Moreover, with respect to Claims 15-19, Applicants submit these claims correspond to Claims 7-9 and relate to the preparation step of a solid concentrate of a tea extract by

purifying the same. As stated above in relation to Claims 7-9, there is no disclosure or suggestion in either JP 6-128168 or JP 46-39058 of the specific steps defined in Claims 15-19. Further, the Examiner makes no attempt to provide any support for rejecting these claims. Accordingly, Claims 15-19 are improperly rejected.

In view of the foregoing, Applicants submit that the claimed invention is not anticipated by and/or obvious in view of these references.

Accordingly, Applicants request withdrawal of these grounds of rejection.

Finally, with respect to the provisional obviousness-type double patenting rejections over copending US 10/581,200, Applicants make no statement with respect to the propriety of these rejections. Nonetheless, noting that it is not clear what scope of allowable subject matter exists in the present application or in the co-pending cited applications, Applicants request that these provisional obviousness-type double patenting rejections be held in abeyance. If it is determined that a Terminal Disclaimer is necessary, Applicants will consider filing the same at a later date.

The Examiner is reminded that MPEP §804 indicates that: "If 'provisional' ODP rejections in two applications are the only rejections remaining in those applications, the examiner should withdraw the ODP rejection in the earlier filed application thereby permitting that application to issue without need of a terminal disclaimer." The present application has an effective filing date of October 27, 2003, which is earlier than the effective filing date of US 10/581,200 (i.e., December 1, 2004). As such, if this provisional obviousness-type double patenting rejection is the only remaining rejection and US 10/581,200 remains pending, the Examiner shall withdraw the provisional obviousness-type double patenting rejection in this case and pass this application to allowance.

Applicants submit that the present application is now in condition for allowance.

Early notification of such action is earnestly solicited.

Respectfully submitted,

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